

YEAR 1860

Tannehill (1938) has listed two tropical cyclones for 1960 and an additional one has been mentioned by Ludlum (1963). The author of this study has recently documented four new cases, bringing to seven the total of known storms for 1860. This contribution represents an increase by 133 percent.

Storm 1, 1860 (Aug. 8-12).

This is a well-known hurricane which is included in Tannehill (1938) and that has also been mentioned by Dunn and Miller (1960) and Ludlum (1963). The author of this study has produced the track for Storm 1, 1860 which is displayed in Fig. 3.

Although it might be possible that the incipient stages of Storm 1, 1860 were related to the heavy gale from N.E. and E.N.E. encountered by the bark "Mary Jane Kimball" at lat. 28 N. on Aug. 5, while sailing from Havana to New York (The New York Times, Aug. 16, 1860, p.8, col.6), the author of this study decided to start the track for Storm 1, 1860 in the Gulf of Mexico on Aug. 8 (Fig. 3). The following information was useful in determining the track prior to landfall on the Louisiana coast on Aug. 11: 1) Schr. "Cerito". Aug. 8, lat. 28 09 N., long. 84 W. Experienced a heavy gale from S. (The New York Times, Aug. 31, 1860, p.8, col.6). 2) Bark "R. H. Gamble" (from St. Marks, Aug. 7). Had a heavy gale from N.E. to S.E. on Aug. 8 and 9 (The New York Times, Sept. 1, 1860, p.8, col.6). 3) Message from New Orleans, Aug. 13. The steamer "Bienville" (from Havana, Aug. 8) has arrived in New Orleans. She reports having experienced a terrific hurricane in the Gulf and was compelled to lay to for 48 hours (The New York Times, Aug. 14, 1860, p.1, col.5).

The New York Times took note of the storm in the vicinity of New Orleans as follows: 1) Message from New Orleans, Aug. 13. There was a storm in the vicinity of New Orleans on Aug. 11 (Saturday). At Procter ville, the water rose 12 feet. Thirty-five to forty lives were lost (The New York Times, Aug. 14, 1860, p.1, col.4). 2) Message from New Orleans, Aug. 13 mentioning that several vessels were wrecked in the Aug. 11 storm (The New York Times, Aug. 15, 1860, p.8, col.6). 3) Message from New Orleans, Aug. 16. Schr. "Powhattan" was wrecked at Cat Island on Aug. 12 while sailing from New Orleans to Pensacola (The New York Times, Aug. 18, 1860, p.8, col.6).

Ludlum (1963) describes the storm over Louisiana, Mississippi and Alabama and the following notes have been extracted from his description: The center moved over the Mississippi delta, coming in an oblique angle, between Last Island and Southwest Pass at modern Burrwood. At Balize (now Pilottown), the wind veered from E. to S.E. to S. At Pass a l'Outre, the gale commenced at 2 A.M. (Aug. 11) from E. by N. until 2 P.M. when it shifted to S. and S.S.W.; the tide rose 4 feet above normal. A report from Plaquemides (upper delta) indicated winds backing from E. to N. and a severe inundation. At New Orleans, the military observer said the wind blew force 8 and 9 (39-54 miles per hour), with a very stormy day on Aug. 11. Water rose 10 feet above normal at Biloxi, where the

wind, originally from the E., backed to N. during the night and blew a perfect hurricane until 3 A.M. Aug. 12. At Centronelle, Al. (near the Mississippi border), the wind veered to S. and blew a tremendous gale about midnight (Aug. 11-12). At Mobile, the wind blew S. by E. and by 6 or 7 A.M. Aug. 12 had veered to W. and started abating.

Sullivan (1986) also offers interesting information about Storm 1, 1860. According to him, winds at a location between Ship and Cat Islands changed to S.W. at 3 A.M. Saturday (it should read Sunday, Aug. 12) as the eye passed inland between Biloxi and Pascagoula. A full-scale hurricane started to hammer the steamers "William C. Young" and "Florida", which had taken refuge in the Mississippi Sound, by 4 P.M. Friday (it should read Saturday, Aug. 11). The storm, although it savaged shipping from the Rigolets to Mobile Bay, caused only comparatively small damage in New Orleans and Mobile.

The track for Storm 1, 1860 was terminated over Alabama on Aug. 12 (Fig. 3). However, there are some clues that, after having significantly weakened over land, the remnants of the storm might have regained some strength off the Carolina coast and caused -at least in part- the gales that were reported by The New York Times as follows: 1) Bark "Black Fish", at lat. 32 50 N., long. 77 10 W., had a N.E. gale and high cross seas on Aug. 14 (The New York Times, Aug. 24, 1860, p.8, col.6). 2) Bark "Ariel" (coming to New York from Port-au-Prince), had a heavy N.E. gale with much rain, thunder and lightning on Aug. 15 and 16 (The New York Times, Aug. 22, 1860, p.8, col.6). 3) Schr. "Martha Ann" encountered a heavy N.E. gale at lat. 33 40 N., long. 76 10 W. on Aug. 15 and 16 (The New York Times, Aug. 27, 1860, p.8, col.6). 4) Schr. "Addie E. Barnes" had a heavy squall from N.E. at lat. 36 40 N., long. 74 35 W. on Aug. 16 (The New York Times, Aug. 20, 1860, p.8, col.6).

Storm 2, 1860 (Aug. 24-25).

This is the first storm that the author of this study has newly documented for 1860. Documentation of the storm was based on information published in newspapers, which also allowed him to determine a track for it (Fig. 3).

The following information was useful in determining a track for Storm 2, 1860: 1) Bark "Three Sisters" (from Santiago de Cuba, Aug. 12), encountered a heavy gale from S. to W.S.W. between latitudes 31 and 33 N., long. 73 W. (The New York Times, Sept. 1, 1860, p.8, col.6). 2) Bark "H. C. Brooks", Aug. 24, lat. 33 N., long. 73 30 W. Experienced a heavy gale from S.W. to E.N.E. which lasted for 14 hours (The New York Times, Aug. 29, 1860, p.8, col.6). 3) Ship "Sabine" (coming to New York from Bombay, India). Aug. 25, lat. 35 20 N., long. 71 23 W., experienced a severe hurricane from E.S.E. to W.N.W. (The New York Times, Aug. 29, 1860, p.8, col.6). 4) Ship "Mary Russell" (from Sunderland in 48 days). Aug. 24, experienced a hurricane which blew away foresail, foretopsail and foretopgallantsail (The New York Times, Aug. 29, 1860, p.8, col.6). Author's note: Aug. 24 appears to be a mistake, it should rather be Aug. 25. 5) Ship "Chace". Aug. 25, off Nantucket Shoals, took a heavy S.W. gale (The New York Times, Sept. 1, 1860, p.8, col.6). 6)

Bark "Jane". Gale from S.E. shifting to N.W. on Aug. 24 when 30 miles off Nantucket (The New York Times, Sept. 1, 1860, p.8, col.6) Author's note: It should read Aug. 25 in lieu of Aug. 24; in addition, 30 miles off Nantucket might be too close to land. 7) Ship "Zurich". Aug. 25, off St. George's Shoals, experienced a hurricane which lasted for 6 hours. Aug. 26, fell in with ship "Rocius" in a sinking condition, picked up her captain and crew. The captain stated, among other things, that the "Rocius" had a heavy gale from S.E. at lat. 40 45 N., long. 67 45 W. on Aug. 25 (The New York Times, Sept. 1, 1860, p.8, col.6).

Storm 3, 1860 (Sept. 11).

This is the second new storm case documented by the author of this study for 1860. The following information allowed one to determine the existence of Storm 3, 1860: Brig "Ocean Spray" had a N.E. gale shifting to N.W. and blowing a hurricane near lat. 40 N., long. 50 30 W. on Sept. 11 (The New York Times, Oct. 15, 1860, p.8, col.6). Based on the information above, Storm 3, 1860 was placed at 40 degrees North, 50.5 degrees West on Sept. 11 (Fig. 3). Due to the lack of suitable information, no track was attempted for this storm.

Storm 4, 1860 (Sept. 11-15).

Tannehill (1938), Dunn and Miller (1960) and Ludlum (1963) have referred to this storm which undoubtedly attained hurricane intensity. The author of this study has produced the track for Storm 4, 1860 which is shown in Fig. 3.

The following marine report was available to the author: Ship "St. Charles", coming to New York from New Orleans in 26 days, experienced a severe hurricane off Tortugas on Sept. 11, continuing to the 13th (The New York Times, Oct. 3, 1860, p.8, col.6). Such information allowed him to start a track for the storm in the southeastern Gulf of Mexico, just west of Dry Tortugas, on Sept. 11 (Fig. 3). However, the storm might have affected the Florida Keys before because, according to The New York Times, Sept. 24, 1860, p.8, col.6, the crew of the "Naiad" (from Cienfuegos, Aug. 30) reported to have seen a vessel ashore and some wreckers on Carysfort Reef on Sept. 11.

The track in Fig. 3 brought Storm 4, 1860 along a smooth curve from the southeastern Gulf of Mexico on Sept. 11 to landfall on the Mississippi delta during the night of Sept. 14-15.

The New York Times took note of the storm in Louisiana, Mississippi and Alabama as follows: Message from New Orleans, Sept. 17. There was a furious gale on Saturday (Sept. 15). Near every house at Balize (Pilottown) was carried away and several lives were lost. The steamer "Galveston", ships "Galena" and "Sheffield" and brigs "West India" and "Toucey" were all blown ashore at the Passes. Milneburgh was submerged and it is reported that all wharves and bath-houses on the coast between New Orleans and Mobile have been swept away. The town of Biloxi is in ruin. At Mobile, the storm was severely felt. Several steamboats as well as the brig "Leghorn", from Mobile for Pensacola, were blown ashore (The New

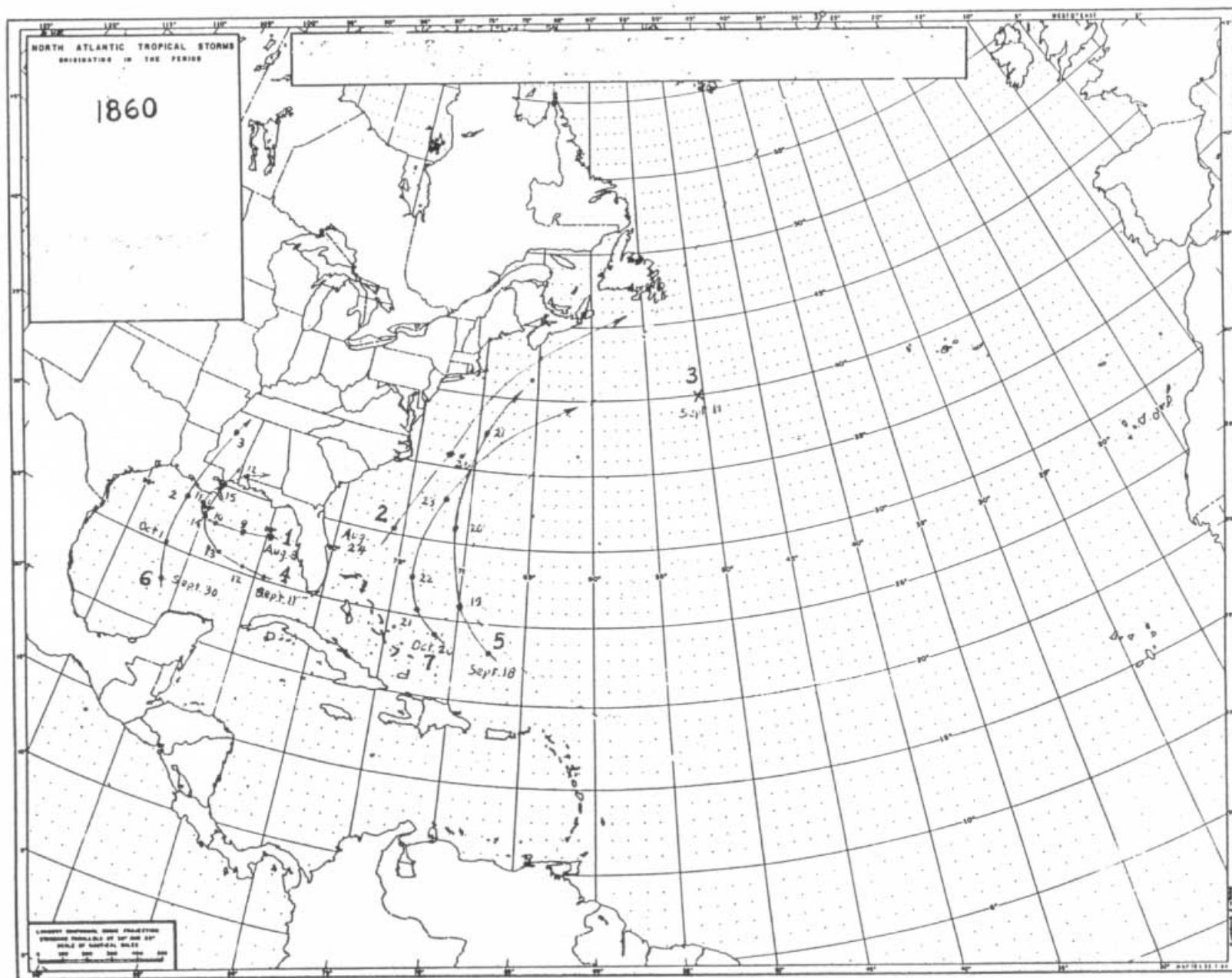


Fig. 3

York Times, Sept. 18, 1860, p.4, col.6). The New York Times, Sept. 21, 1860, p.1, col.5 and 6, reproduced from The New Orleans Picayune (Sept. 16) an extensive article on the storm. The most important statement in that article is quoted next: "It is considered that this gale was as intense as that of the 11th of August, although it did not last as long. But in August the swamps were nearly dry and the waters from the Lake found a natural outlet; whereas, yesterday, the swamps being full, the water rose in the streets of Milneburgh and covered the railroad track for some distance".

Ludlum (1963) states that the storm occurred on Sept. 14 at night, lasting to the morning of Sept. 15 and that there was a severe blow at Pilottown (Balize). At New Orleans, it was a heavy storm of wind and rain. The center seemed to have passed near Biloxi and Pascagoula. Height of the storm at Biloxi was around 11 A.M. Sept. 15. At Mobile, the water level rose to only 19 inches lower than in the 1852 Mobile hurricane.

Sullivan (1986) states that, at Pascagoula, the water rose 7 feet in 20 minutes, flooding the village. He also states that an eyewitness on the deck of the steamer "Alabama" described Biloxi at dawn Sept. 16 using these terms: "... the scene before us beggars description -not only the wharves all gone but the houses unroofed and some blown down and entirely destroyed... The whole beach, as far as the eye can reach, is one mass of wreck and ruin. A more desolated prospect I never beheld..."

Storm 5, 1860 (Sept. 18-21).

This is the third storm newly documented by the author for 1860. A track for Storm 5, 1860 is displayed in Fig. 3.

The following information was useful in determining the evolution of the storm: 1) Ship "Castor" (from St. Thomas to New York). Left St. Thomas on Sept. 15. Experienced a cyclone from the 18th to the 20th (starting 3 days out of St. Thomas). Wind went from E.S.E. to S. to S.W. (The New York Times, Sept. 27, 1860, p.8, col.6). 2) Bark "Adelaide" had a gale from N.W. at lat. 37 N., long. 73 W. on Sept. 21 (The New York Times, Sept. 26, 1860, p.8, col.6). 3) Schr. "Marietta Smith" experienced a heavy gale from N.N.W. on Sept. 22, coming to New York from Turks Is. in 13 days (The New York Times, Sept. 28, 1860, p.8, col. 6).

The track shown in Fig. 3 was started near 23 degrees North, 67 degrees West on Sept. 18, after making an estimate that the "Castor" had reached a position near lat. 25 N., long. 66.5 W. and therefore, it would make sense for the vessel to have received winds from the E.S.E. on that day. Then, both the storm and the vessel continued moving towards higher latitudes but at different speeds, being the storm faster than the ship and causing winds at ship's positions to change to the S. and S.W. during the next two days (Sept. 19-20). The estimated position for Storm 5, 1860 on Sept. 21 was based, primarily, on the report furnished by the "Adelaide". The information given by the "Marietta Smith" was not used for track purposes because the author believes that the Sept. 22 date is in error and that the storm should have passed some distance to the east of the schooner on Sept. 20 or 21.

Storm 6, 1860 (Sept. 30- Oct. 3).

Ludlum (1963) has mentioned this storm as having occurred in Mississippi and Louisiana on Oct. 2-3, 1860. However, the author of this study has found enough information to track the storm starting on Sept. 30. The author's track for Storm 6, 1860 is displayed in Fig. 3.

The New York Times, Oct. 29, 1860, p.8, col.6, published that the schooner "Adda", on the coast of Yucatan, Sept. 30, encountered a heavy gale from S.E. which lasted for 4 days and drove the vessel within 60 miles of Pass a l'Outre (Mississippi delta); the vessel had sailed from Mexico on Sept. 8. Based on the above report, Storm 6, 1860 was placed near 23 degrees North, 91.5 degrees West on Sept. 30 and then moved northward over the next two days.

Ludlum (1963) states that landfall on Atchafayala Bay appeared logical from the future course of the storm. The center passed west of New Orleans and close to Baton Rouge and then moved to central Mississippi, east of Natchez and Vicksburg. The storm struck inland with great force at noon Oct. 2. Gales were at the height in St. James parish from 12 to 4 P.M. Winds at New Orleans began to rise early Tuesday (Oct. 2) and continued for 24 hours. The Oct. 2 description given by the Medical Corps observer at New Orleans was: "A very stormy day, blowing at times almost a hurricane..."

Ludlum (1963) also states that the wind at Crescent City was N.E. force 6 (25-31 miles per hour) at 7 A.M. Oct. 2, E. force 8 (39-46 miles per hour) at 2 P.M., and that it continued from the E. until at least 9 P.M. At Natchez, the "terrible gale" reached its peak after dark Oct. 2. At Westward, on the Red River, the gale was from E. until 11 P.M. Tuesday (Oct. 2), then N. still increasing and the height of the gale came from 5 to 11 A.M. Oct. 3.

According to Ludlum (1963), in and around New Orleans, this third storm produced much greater damages than the August and September hurricanes because these areas were hit this time by the dangerous eastern semicircle of the storm. However, Sullivan (1986) -quoting a correspondent of the New Orleans Daily Data at Pass Christian- states that "the water was not so high as on the 15th (of September)... and the wind but little less violent than on the last occasion".

Storm 7, 1860 (Oct. 20-23).

This is the fourth new storm case documented by the author of this study for 1860. A track for Storm 7, 1860 is shown in Fig. 3.

The following information was considered during the process of determining the above mentioned track: 1) Brig "Lincoln" (coming to New York from Maracaibo), lat. 17 40 N., long. 74 W., Oct. 18 and 19, experienced a hurricane from S.E. to S.W., shipped a sea which carried off deckload of fustic and everything moveable on deck, etc. (The New York Times, Nov. 6, 1860, p.8, col.5). 2) Brig "Baltimore", Oct. 19, strong gale from N.E., the wind veering to E.S.E. and S., from 10 A.M. to 5 P.M. it blew a perfect hurricane with rain and heavy sea. On the 20th, lat. 26 32 N., long. 74 08 W., passed brig "John Hathaway" (at 2 P.M.). The "Baltimore" had nothing but light westerly winds and calm until the 15th when she

experienced a strong gale which continued to the 18th; been 6 days north of Hatteras with light winds most of the time (The New York Times, Oct. 25, 1860, p.8, col.6). 3) Schr. "C. H. Cooke" (from Jacmel, Haiti, Oct. 17). On Oct 21, eastward of Maracaibo Island (?) S.S.W. 10 miles, spoke the brig "Express", from Halifax for Kingston (Jamaica), which indicated that on the previous day (Oct. 20) had experienced a hurricane from N.E. to W.N.W. which lasted for 12 hours (The New York Times, Nov. 2, 1860, p.8, col.5 and 6). Author's note: It is obvious that Maracaibo Island is a typographic error and it is very likely that the island referred to in the report had been Mayaguana in the southeastern Bahamas. 4) Brig "Henry C. Brooks". Night of Oct. 22, lat. 30 N., long. 72 10 W., had a severe hurricane from S.S.E. to S.S.W. which lasted for 4 hours (The New York Times, Oct. 31, 1860, p.8, col.6). 5) Brig "Oraville", Oct. 25, lat. 32 01 N., long. 33 10 W. (it should read 73 10 W.), spoke Schr. "Eugene", from Salem to Para (Brazil) 15 days out. The captain of the "Eugene" reported having had a hurricane from N.E. some days earlier in the Gulf (Stream) but no damage (The New York Times, Nov. 3, 1860, p.8, col.6). 6) Brig "Agnes". Oct. 23, lat. 35 50 N., long. 70 W., experienced a hurricane from S.E. to W. which hove the vessel on her broadside where she laid for 3 hours (The New York Times, Nov. 3, 1860, p.8, col.6). 7) Ship "Gondar". Oct. 23, lat. 37 05 N., long. 68 07 W., experienced a hurricane from southward which blew with great violence for about 3 hours when suddenly it became calm, and in less than one minute the wind came from N. with such violence that the top gallant mast was broken off by the cap, the maintopsail was blown to pieces and the ship thrown on her beam ends (The New York Times, Nov. 2, 1860, p.8, col.5 and 6).

Items 1) and 2) were discarded in the process of determining a track for Storm 7, 1860. The reason for rejecting item 1) was that the alleged hurricane encountered by the "Lincoln" on Oct. 18 and 19 would have to have moved towards the northeast until reaching the Storm 7, 1860 estimated position near 24 degrees North, 71.5 degrees West on Oct. 20, and it would have been met by the "C. H. Cooke" which sailed from Jacmel, Haiti, on Oct. 17. However, the "C. H. Cooke" did not report hurricane conditions and, consequently, the author believes that either the bad weather reported by the "Lincoln" was not related to the core of Storm 7, 1860 or that the position given by the vessel is in error and the "Lincoln" did meet the storm elsewhere. The reason for discarding item 2) was that there are many inconsistencies in the report given by the "Baltimore". One outstanding inconsistency found in the report is that the "Baltimore", which arrived in New York on Oct. 24, had been north of Hatteras for 6 days with light winds most of the time and reported a position at lat. 26 32 N., long. 74 08 W. on Oct. 20, the day after having met the alleged hurricane on Oct. 19. Another outstanding inconsistency is that the "Baltimore" reported to have had light westerly winds and calm until the 15th when she experienced a strong gale which continued through the 18th; this statement does not fit the report of having had the alleged hurricane on Oct. 19.

After having eliminated items 1) and 2), the track shown in Fig. 3 was based on the remaining items. As all reports refer to

Storm 7, 1860 as a hurricane, it seems fair to accept that the storm reached hurricane intensity. The "Gondar" was found herself in the eye of the hurricane for less than one minute on Oct. 23.